

REMARKS/ARGUMENTS

Amendments

Before this Amendment, claims 50-54 were present for examination. Claims 1-49 were previously cancelled. Claims 50-54 are amended. Therefore, claims 50-54 are present for examination, and claim 50 is the independent claim. Applicants respectfully request reconsideration of this application.

The Final Office Action ("Office Action") rejected claims 50-54 under 35 U.S.C. §103(a) as being unpatentable over the cited portions of Liston, U.S. 3,817,425 ("Liston") in view of the cited portions of Hamblin, U.S. 6,607,522 ("Hamblin").

The follow-on Advisory Action mailed on 3/14/08 then maintained the rejection of the claims. The Advisory Action indicated that the claim amendments submitted on 2/27/08 were not entered by the Office.

35 U.S.C. §112 Rejection

The Office Action initially rejected claims 50-54 under 35 U.S.C. §112 as being indefinite because claim 50 did not recite a coupling feature. Since claims are drafted from the perspective of one of ordinary skill in the art, it was believed that one of ordinary skill in the art would understand the two device to have been coupled. Nevertheless, claim 50 has now been amended to recite "coupling said first syringe with a second syringe, said second syringe having a volume size smaller than the volume size of the first syringe". It is believed that this is readily apparent from the specification and thus does not add new matter.

Furthermore, to maintain clarity of the claim, the aspect of "said second syringe having a volume size smaller than the volume size of the first syringe" has been stricken from the subsequent element.

Finally, claims 50-54 have been amended to recite "substance comprising LCP" rather than just "LCP" in order to maintain consistency with the terminology used in the preamble.

35 U.S.C. §103(a) Rejection, Liston, Hamblin

The Office Action initially rejected claims 50-54 under 35 U.S.C. §103(a) as being unpatentable over the cited portions of Liston in view of the cited portions of Hamblin. The Advisory Action indicated that the previously proposed amendments would not be entered. New claim amendments have now been proposed. In view of the new claim amendments, the claims are no longer limited to only manual manipulation.

The Advisory Action asserted that the valve 300 functions as a coupling/decoupling device. Furthermore, the Advisory Action asserted that when the valve is placed in a decoupled position, as shown in Fig. 10, that the syringes are not coupled together.

Claim 50, however requires:

"decoupling said second syringe from said first syringe so as to permit manipulation of said second syringe; and then"

"utilizing said second syringe to dispense said substance comprising LCP."

Thus, as can be seen from the underlined language, the dispensing of material contained in the second syringe takes place after decoupling occurs according to claim 50. However, in the device taught by Liston, the two syringes are charged with fluids when the valve is in the position shown in Fig. 10 (i.e., the decoupled position) and then the fluids in the two syringes are discharged when the valve is in the position shown in Fig. 9 (i.e., the coupled position). Thus, in Liston, the claim element "utilizing said second syringe to dispense said substance comprising LCP" does not take place after the claim element "decoupling said second syringe from said first syringe so as to permit manipulation of said second syringe." Rather, in Liston, discharge/dispensing takes place while the syringes are coupled together, as shown by Fig. 9 which is labeled "Discharge Position." Thus, no dispensing of a mixed substance takes place after decoupling.

The specification of Liston further clarifies the operation of Liston. For example, it states at column 7, lines 44-60:

"After the probe assembly is in its charge position and after valve element 302 has rotated to the position shown in FIG. 10, the pin inserted in hole 350 of pinion gear 348 (FIG. 14) engages an end of slot 345, thereby causing the pinion gear to rotate. When the pinion gear rotates, it drives rack 322 and carriage 312 in a downward direction (FIG. 11). Since carriage 312 is attached to plunger 294 and valve 300, the plungers of the syringes are pulled away from the syringe barrels, thereby enlarging the cavities defined by the syringes. In this mode of operation, a small amount of fluid is drawn from test tube 140 through end point 261 of the probe assembly into nozzle 262. Normally, the amount of fluid is approximately 10 microliters. At the same time, reagent fluid is drawn from reservoir 272 through tube 275, valve element 302, and tube 298 into the cylinder of syringe 290."

See Liston at column 7, lines 44-60.

The above quotation from Liston explains how the larger syringe 290 is charged with reagent fluid while the syringes are in the decoupled position shown in Fig. 10. The following quotation from Liston explains how the syringes are then coupled together and how reagent is then discharged into the cuvette chamber where mixing takes place:

"As a result, plungers 284 and 294 are moved into barrels 281 and 291 of syringes 280 and 290, respectively. This movement reduces the size of the cavities defined by syringes 280 and 290 so that the sample fluid located in probe assembly 260 is expelled into cuvette compartment 83, and the reagent fluid held in cylinder 295 is expelled through tube 298, valve 300, plunger 284, cylinder 283 of microsyringe 280, tube 226, and probe assembly 260 into cuvette compartment 83. The carriage continues to move upward until microswitch 363b is operated by stop member 321, thereby terminating signal D2 and stopping the carriage. The foregoing

method of discharge is an important feature, since the reagent fluid is passed through the microsyringe 280, tube 226, and the probe assembly after the fluid sample from the test tube has been expelled into the cuvette compartment. This operation purges these components of the sample fluid, thereby preparing the system to mix another sample with an additional quantity of the reagent fluid. In order to provide adequate purging, the amount of reagent fluid discharged through the probe assembly should be at least 10 times as great as the amount of sample fluid discharged. The proper ratio of reagent to sample fluid is provided by adjusting the relative sizes of the microsyringe and macrosyringe. "

"The curved bottom and angled sidewalls of cuvette 30 cause the fluid discharged by the probe assembly to be mixed in each cuvette compartment by a swirling action."

See Liston at column 8, line 60 - column 9, line 21.

Furthermore, this portion of Liston explains that any material transferred from the larger syringe 290 to the smaller syringe 280 is a pass through operation. Thus, there is no opportunity for decoupling to take place in Liston prior to dispensing. Rather, in Liston, transfer and dispensing take place in sequence without decoupling.

Thus, Liston in combination with Hamblin clearly do not make obvious claim 50 as a whole. For at least the reasons explained above, the claim is believed to be in condition for allowance. Claims 51-54 depend from claim 50. Therefore, for at least the same reasons that claim 50 is in condition for allowance, claims 51-54 are also in condition for allowance.

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PATENT

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

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